Sadman Kazi

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Experience

Amazon Web Services   *Seattle, WA*

SOFTWARE DEVELOPMENT ENGINEER II, AWS CERTIFICATE MANAGER (ACM)   *December 2020 - Present*
SOFTWARE DEVELOPMENT ENGINEER I, AWS CERTIFICATE MANAGER   *July 2019 - November 2020*

- **Lead engineer** on Managed Certificate Renewal lifecycle feature and customer communications manager of ACM, leading feature development, managing 4+ engineers and orchestrating effort among 2 PMs, 2 sister teams & 5 partner teams
- Designed a **serverless canary infrastructure** capable of running long asynchronous workflows in parallel, providing metrics on service health and resilience using Lambda, Cloudformation, CloudWatch, DynamoDB, and EventBridge
- Designed & developed a distributed **job scheduling system** for asynchronous tasks to distribute system load, eliminating **100%** of throttled capacity events on DynamoDB tables and other AWS dependencies, the primary scaling bottleneck to migrate off of relational databases
- Worked with PMs & partner teams across AWS orgs to identify & eliminate high operational pain points for customers when importing 3rd party resources at scale, driving down **critical error rate to 0%** and **p99 latency by 75%**
- Developed & launched ACM as a self-service CloudFormation resource with full automation for customer certificates by coordinating with partner team in **20 regions**
- Designed, developed & deployed projects and automated operational tooling for DB migration from RDS to a hybrid data storage solution using DynamoDB, Elasticsearch, and Kinesis
- Reduced fault rate of public APIs by **98%**, driving down team operational load
- Spearheaded a multi-team "Game day" by designing and simulating 25 different failure scenarios to measure operational preparedness
- Interviewed and mentored 10+ SDEs and Support Engineers for subject matter expertise accreditation

NVIDIA   *Santa Clara, CA*

SOFTWARE ENGINEERING INTERN, AV DEEP LEARNING TEAM   *September 2018 - December 2018*
SOFTWARE ENGINEERING INTERN, ANDROID DEEP LEARNING TEAM   *January 2018 - April 2018*

- Developed adaptable visualization for road signs labels and information in C++ supporting **runtime configuration of classification models** and **hierarchical deep neural network** model inference support for DRIVE platform
- Developed metric evaluation platform for measuring performance of sub-label classifier networks on DRIVE platform in Python
- Built home security service for Shield TV with offline DL inference & HD recording, from upto 8 camera streams, using only **10% GPU** via inference control, allowing other resource-heavy applications to run in the foreground

Wave Computing   *Campbell, CA*

SOFTWARE ENGINEERING INTERN, SYSTEM AND ARCHITECTURE TEAM   *May 2017 - August 2017*

- Rewrote legacy C simulator code to maintainable object-oriented **C++11** code, running **15% faster**
- Added modular CMake builds, multiprocess automated tests & CI pipelines, improving workflow for multiple projects
- Built a system that mapped Keras DL models & TensorFlow operators to C++ models runnable on Wave chips

Softare Engineering Internships   *Canada*

EXTREME NETWORKS, AUTODESK, DELOITTE INNOVATION LAB - D{} LAB   *2015 - 2016*

- Built REST API in Java for configuring WLAN controllers, worked on a 3d engine for immersive visualization of architectural models and a real-time communication architecture for large-scale sensor networks (for mining)

University of Waterloo NanoRobotics Group   *Waterloo, ON*

TECHNICAL LEAD, CONTROLS TEAM   *May 2016 - December 2017*

Led development of the controls software for ICRA 2016-2018 (winning multiple first place awards)

Skills

Technologies   C++, C, Python, Lua, Java, Rust, C#, Bash, Docker, SQL
Cloud Tech   AWS: Lambda, DynamoDB, RDS, KMS, CloudFormation, SQS, SNS, Step Functions, CloudWatch, ELB, ACM, Elasticsearch
Systems   Serverless, Distributed Computing, Database design, Data streaming, Security, DevOps

Education

University of Waterloo   *Waterloo, Ontario*

BACHELOR OF SOFTWARE ENGINEERING   *2014 - 2019*

Notable Courses: OS, Algorithms, DB, AI, Data Structures, Architecture, Concurrency, Distributed Computing, Networks.